

Overview

- IO-Link dual channel output
- All market typical hygienic connections available
- Resistant to all common CIP cleaning media
- Condensate-proof measuring cell
- Space-saving installations from DN 25 on
- Absolute pressure, relative pressure and vacuum measurement



Picture similar



Technical data

Performance characteristics

Pressure type	Absolute Relative (gauged)
Compensated temperature range	-20 ... 105 °C
Long term stability	≤ 0.2 % FSR/a
Max. measuring error	± 0.5 % FSR ± 1.0 % FSR , 0 ... 0.4 bar Including zero-point and span error, non-linearity (by terminal base line), hysteresis and non-repeatability (EN 61298-2)
Max. measuring span	40 bar
Measuring range	-1 ... 40 bar
Standard error of measurement (BFSL)	± 0.2 % FSR ± 0.5 % FSR , 0 ... 0.4 bar Including non-linearity, hysteresis and non-repeatability according BFSL
Min. measuring span	0.4 bar
Rise time (10 ... 90 %)	≤ 5 ms
Temperature coefficient	≤ 0.2 % FSR/10 K , measuring span ≤ 0.2 % FSR/10 K , zero point

Process conditions

Process temperature	Depending on process connection Refer to section "Operating conditions"
Process pressure	Refer to section "Operating conditions"
SIP/CIP compatibility	< 35 min, in general @ medium temperature up to 150 °C < 60 min, in general @ medium temperature up to 135 °C < 60 min, with process connection G 1/2 A hygienic @ medium temperature up to 135 °C

Process connection

Connection variants	Refer to section "Dimensional drawings"
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Process connection

Wetted parts material	AISI 316L (1.4404)
Wetted parts material, membrane	AISI 316L (1.4435)
Surface roughness (in contact with medium)	
Membrane	Ra ≤ 0.4 µm
Process connection	Ra ≤ 0.8 µm Ra ≤ 0.4 µm, optional with ISO 2852 Tri-Clamp DN 25 (BCID: C03)
Weld joint	Ra ≤ 0.8 µm

Ambient conditions

Operating temperature range	-20 ... 85 °C
Storage temperature range	-40 ... 85 °C
Degree of protection (EN 60529)	IP 67 , without connector M12-A, 5-pin IP 69 , with appropriate cable
Insulation resistance	> 100 MΩ , 500 V DC
Bump (EN 60068-2-27)	100 g / 2 ms, 4000 impulses per axis and direction
Cold (EN 60068-2-1)	Ab: -40 °C, 2 h (not in operation)
Damp heat, cyclic (EN 60068-2-30)	Db: 55°C, Variant 1, 2 cycles (2 · 24 h)
Shock (EN 60068-2-27)	50 g / 11 ms, 100 g / 6 ms, 10 impulses per axis and direction
Vibration (sinusoidal) (EN 60068-2-6)	1.5 mm p-p (10 ... 58 Hz), 10 g (58 Hz ... 2 kHz), 10 cycles (2.5 h) per axis
Vibration, broad-band random (EN 60068-2-64)	0.1 g ² / Hz, >10 gRMS (20 Hz...1 kHz), 300 min. per axis

Output signal

Current output	4 ... 20 mA , 3-wire
Load resistance	Rs ≤ (Vs - 11 V)/0.02 A
Short circuit protection	Yes

Technical data

IO-Link interface

IO-Link version	1.1
Device profile	Smart Sensor Profile
IO-Link port type	Class A
Baud rate	38,4 kbaud (COM2)
SIO-mode	Yes
Process data (cyclic)	Pressure or temperature Switch state State of alert Scaling factor
Diagnostic data (acyclic)	Ambient pressure Device temperature CPU temperature Operation time (since power-on) Device Status Power supply
Adjustable data (acyclic)	Offset settings Switch parameters Measuring mode

IO-Link interface

Dual Channel	IO-Link / Analogue Analogue / SIO Mode
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Housing

Style	Compact transmitter
Overall size	Refer to section "Dimensional drawings"
Material	AISI 316L (1.4404)

Electrical connection

Connector	M12-A, 5-pin, stainless steel, IO-Link output
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Power supply

Voltage supply range	18 ... 30 V DC , with IO-Link 11 ... 30 V DC , with 4 ... 20 mA output signal
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Reverse polarity protection	Yes
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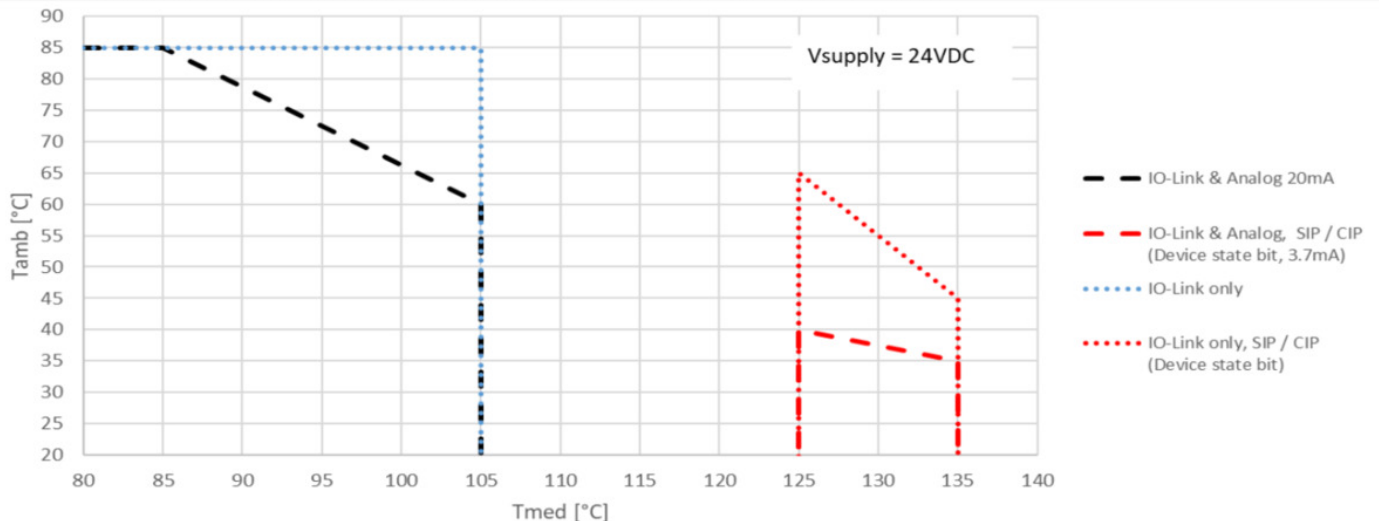
Compliance and approvals

EMC	EN 61000-6-2 EN 61000-6-3 EN 61326-2-3
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Operating conditions

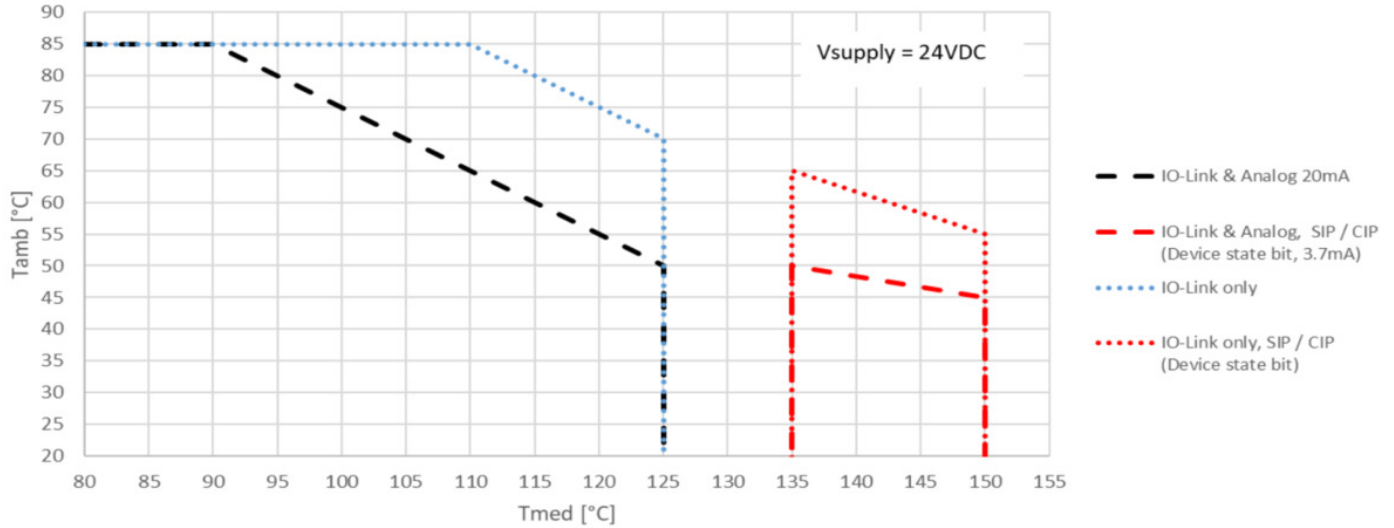
Measuring range (bar)				Proof pressure (bar)	Burst pressure (bar)
-1 ... 0	-1 ... 1	0 ... 0.4	0 ... 1	5	10
-1 ... 3	-1 ... 5	0 ... 2.5		10	20
0 ... 4	0 ... 5				
-1 ... 9	0 ... 6	0 ... 10		20	40
0 ... 16	0 ... 25			50	100
0 ... 40				80	160

Maximum operating conditions in subject to temperature - process connections codes 41, 44, 48



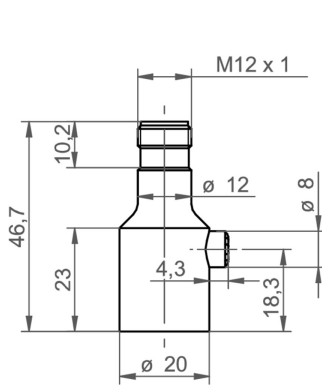
Operating conditions

Maximum operating conditions in subject to temperature - process connections codes 53, 54, 59, 61, 62, 65, 66, 68

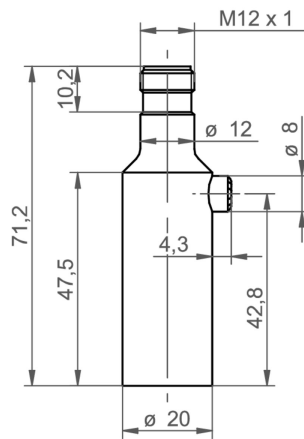


Dimensional drawings (mm)

Housing



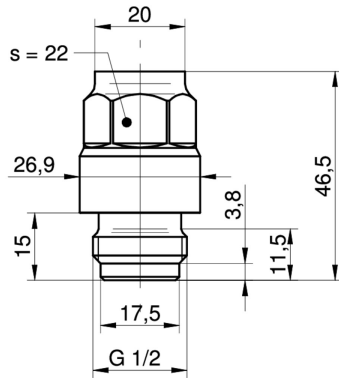
Short housing with connector M12-A



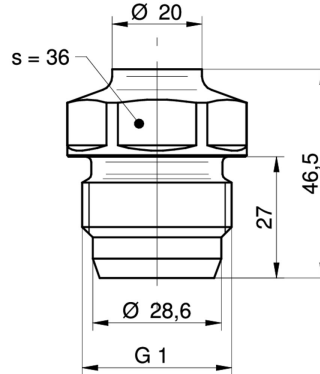
Long Housing with connector M12-A

Dimensional drawings (mm)

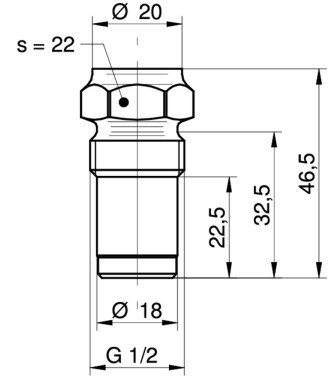
Process connection



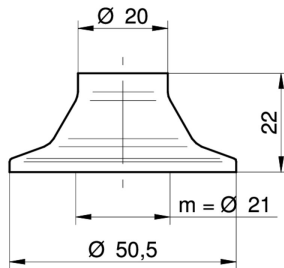
G51-41
G 1/2 A DIN 3852-E (BCID: G51)



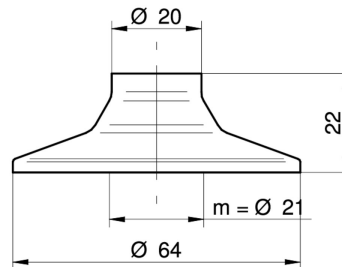
A04-44
G 1 A hygienic (BCID: A04)



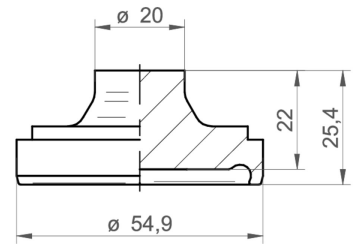
A03-48
G 1/2 A hygienic (BCID: A03)



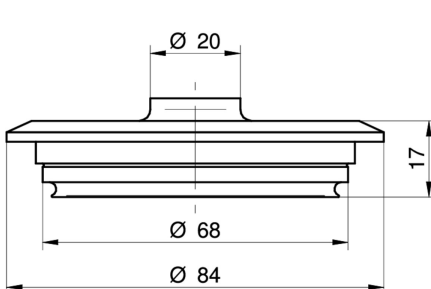
C03-53
Tri-Clamp Ø 50.5 (BCID: C03)



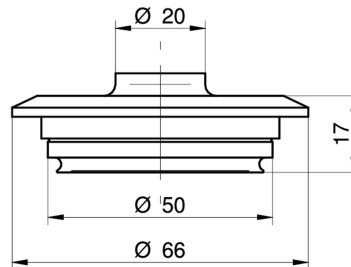
C05-54
Tri-Clamp Ø 64.0 (BCID: C05)



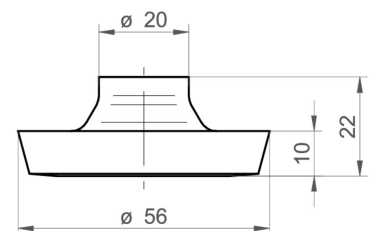
H03-59
DIN 11864-1-A (aseptic screwed union), DN 40 (BCID: H03)



V02-61
Varivent® DN 32 ... 125; 1 1/2" ... 6" (Type N), Ø 68 (BCID: V02)



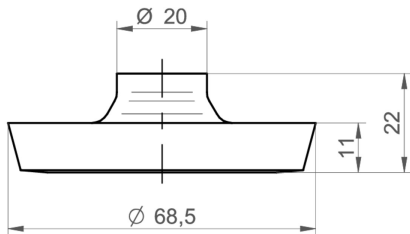
V01-62
Varivent® DN 25; 1" (Type F), Ø 50 (BCID: V01)



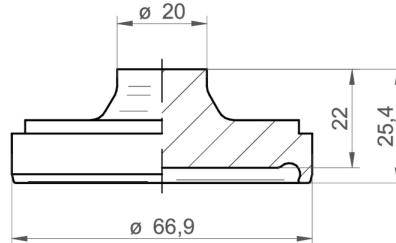
D03-65
DIN 11851 (dairy pipe connection), DN 40 (BCID: D03)

Dimensional drawings (mm)

Process connection



D04-66
DIN 11851 (dairy pipe connection), DN 50
(BCID: D04)



H04-68
DIN 11864-1-A (aseptic screwed union), DN 50
(BCID: H04)

Electrical connection

Output type

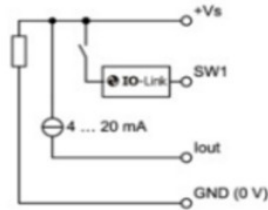
Equivalent circuit

Electrical connection

Function

Pin assignment

IO-Link & analog 3-wire



+Vs	1
GND (0V)	3
SW1, IO-Link	4
Iout	2
Frame ground	plug thread
n.c.	5

operating mode	used pins
IO-Link	pin 1, 3, 4
Analog 4 ... 20 mA	pin 1, 2, 3
Dual-channel	pin 1, 2, 3, 4

Ordering information

Ordering key - Configuration possibilities see website

	PP20H	-	2	.	#	###	#	.	D1	15	.	##	#	#	2	0	.	0	0	0
Product	PP20H																			
Housing material																				
Stainless steel 1.4404 AISI 316L																				
Accuracy																				
±1.0 % FS																				
±0.5 % FS																				

Ordering information

Ordering key - Configuration possibilities see website

	PP20H	-	2	.	#	###	#	.	D1	15	.	##	#	#	2	0	.	0	0	0
Measuring range																				
0 ... 0.4 bar (EN)							B11													
0 ... 1 bar (EN)							B15													
0 ... 2.5 bar (EN)							B18													
0 ... 4 bar (EN)							B19													
0 ... 6 bar (EN)							B20													
0 ... 10 bar (EN)							B22													
0 ... 16 bar (EN)							B24													
0 ... 25 bar (EN)							B26													
0 ... 40 bar (EN)							B27													
-1 ... 0 bar (EN)							B59													
-1 ... 1 bar (EN)							B73													
-1 ... 3 bar (EN)							B76													
-1 ... 5 bar (EN)							B77													
-1 ... 9 bar (EN)							B79													
0...5 bar (EN)							B98													
Kind of pressure																				
Relative (gauged)							R													
Absolute							A													
Output signal																				
IO-Link Dual Ch., 4...20 mA V1									D1											
Output Connection																				
M12-A, 5-pin										15										
Process connection																				
G 1/2 A DIN EN ISO 1179-2 (3852-E)																41				
Front flush membrane ⁽²⁾																				
G 1 A hygienic (A04) ⁽²⁾																44				
G 1/2 A hygienic (A03) ⁽²⁾																48				
ISO 2852 (Tri-Clamp), DN 25, Ø 50.5 (C03) ⁽¹⁾																53				
ISO 2852 (Tri-Clamp), DN 40; 51, Ø 64.0 (C05) ⁽¹⁾																54				
Varivent® DN 32...125; 1 1/2...6 (Type N), Ø 68 (V02) ⁽³⁾																61				
Varivent® DN 25; 1 (Type F), Ø 50 (V01) ⁽⁴⁾																62				
DIN 11864-1-A (aseptic screwed union), DN 50 (H04) ⁽¹⁾																68				
DIN 11864-1-A (aseptic screwed union), DN 40 (H03) ⁽³⁾																59				
DIN 11851 (dairy pipe connection), DN 40 (D03) ⁽¹⁾																65				
DIN 11851 (dairy pipe connection), DN 50 (D04) ⁽¹⁾																66				
Process connection material																				
Stainless steel 1.4404 AISI 316L																2				
Edelstahl 1.4404 Ra0.4																3				
Seal																				
None																			0	
EPDM																			2	
Oil filling																				
NSF H1 listed (FDA approved)																			2	
Display																				
Without display																			0	

Ordering information

Ordering key - Configuration possibilities see website

	PP20H	-	2	.	#	###	#	.	D1	15	.	##	#	#	2	0	.	0	0	0
Explosion protection																				
Without																		0		
Approvals																				
Standard approvals																		0		
Technology																				
Silicon																		0		

- (1) EHEDG only with special gasket
- (2) EHEDG not included
- (3) EHEDG included
- (4) EHEDG not included, only for tank installation